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CLAIMS JC17 Rec'd PCT/PTO 17 JUN 2005

1. A method of correcting at least one parameter to be corrected of a complex digital signal (s_{er}, d) comprising the following steps:

- a decomposition of the signal into two signals, envelope (e_{er}) and phase (p_{er}),
- a determination of the corrector c to be applied to the parameter of the envelope, said corrector being obtained by searching, among predetermined values, for the value of the corrector corresponding to the minimum of the out-of-band noise power (N_h) of the output signal of a digital signal processing chain comprising a correction as a function of said corrector.

2. A loop for correcting at least one parameter to be corrected of a complex digital signal (s_{er}, d) comprising:

- an input on which it receives the digital signal (s_{er}, d),
- a calculation system linked directly or indirectly to this input,
- a correction device (68') deployed in a chain for processing the digital signal, and linked to the calculation system which provides it with at least one corrector (c),

the calculation system being configured in such a way that it comprises:

- means of decomposition (64) of the signal into two signals, envelope (e_{er}) and phase (p_{er}), and
- means of determining (67') the corrector c to be applied to each parameter to be corrected (p_c) of the envelope by searching, among predetermined values, for the value of the corrector corresponding to the minimum out-of-band noise power (N_h) of the output signal of a digital signal processing chain comprising a correction as a function of said corrector.

3. The correction loop as claimed in the claim 2

wherein that the input is the only input.

4. The correction loop as claimed in the claim 2 wherein the parameters to be corrected (p_c) comprise a delay and the correctors (c) comprise an inverse delay.

5. The correction loop as claimed in the claim 2 wherein the parameters to be corrected (p_c) comprise an offset of the envelope signal with respect to the phase signal of the digital signal and the correctors (c) comprise an inverse offset.

6. The correction loop as claimed in the claim 2 wherein the parameters to be corrected (p_c) comprise a nonlinearity of the envelope signal, and the correctors (c) comprise a precorrection.

7. The correction loop as claimed in the claim 2 wherein the digital signal is a modulated digital signal (S_{RF}) and in that the loop comprises:

- a demodulator (61) between the input and the calculation system,
- a correction device (68') intended to be deployed in a modulator (30) with which the demodulator (61) is associated.

8. A transmitter comprising a modulator (30) and the correction loop (60) as claimed in the claim 7.

9. The transmitter as claimed in the claim 8 wherein it is a linear transmitter.

10. The transmitter as claimed in claim 8 wherein it comprises separate means of processing (32, 33) of the phase and of the envelope of the modulated digital signal.

11. The transmitter as claimed in the claim 10 wherein

the modulator (30) comprises separate means of processing of the envelope and of the phase and a multiplier of the envelope signal and of the phase signal at the output implementing the method of Kahn.

12. The use of the transmitter as claimed in the claim 8 for the radio broadcasting or telebroadcasting of digital signals.